From: Michael A Glagola (Generation - 34) [/O=DOMINION/OU=EXCHANGE ADMINISTRATIVE GROUP

(FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=MIC0210]

Sent: 7/20/2015 6:57:21 AM

To: 'John Glover' [jglover@gloverconstruction.com]; 'rwilliams@gloverconstruction.com'

[rwilliams@gloverconstruction.com]

Subject: FW: Possum Point - Oil Water to Metals Pond & Pond D Evaluation

Good morning,

FYI See below.

I guess if everything goes well this morning, are you ready to make the hot tap, install the plug, and start the dewatering?

Thanks,

Mike

----Original Message----

From: Scott Quinlan [mailto:s.quinlan@gaiconsultants.com]

Sent: Monday, July 20, 2015 6:51 AM

To: Michael A Glagola (Generation - 34)

Cc: Doug Wight (Generation - 34); Jeffrey R Marcell (Generation - 3); Matthew M Woodzell (Generation -

3); John Klamut; John DeBarbieri; Adam Scheller

Subject: FW: Possum Point - Oil Water to Metals Pond & Pond D Evaluation

Mike:

As stated below, we believe that the pumps in pump station #5 will be sufficient to pump against the flows generated by Glover. However, we do have to confirm with the manufacturer the minimum continuous stable flow of the pump. The serial number of the pump would prove helpful. We will also confirm some elevations at pump station # 5 with the station. We can talk further today on our follow-up call.

Sincerely,

Scott C. Quinlan, PE Director - Energy Water Resources Engineering and Planning

GAI Consultants, Inc.
500 Cranberry Woods Drive, Cranberry Township, PA 16066
724.772.2011 ext. 2409 | C 412.584.4508 |

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From: John DeBarbieri

Sent: Friday, July 17, 2015 5:27 PM To: Scott Quinlan; Adam Scheller

Subject: Possum Point - Oil Water to Metals Pond & Pond D Evaluation

Scott,

Regarding the evaluation of the existing ash sluice line and the No. 5 Lift Station pump:

We estimated that Glover could pump up to 3,600-gpm of Ponds A, B, and C waters to the Metals Cleaning Waste Treatment Facility (Metals Pond) while accommodating 400-gpm of oil water from No. 5 Lift Station.

Similarly, we estimated that Glover could pump up to 1,400-gpm of Ponds A, B , & C waters if the ash sluice line was extended from the Metals Pond to Pond D.

Our assumptions are as follows:

- 1. 200-gpm of Pond E well point waters are being pumped at the same time.
- 2. Static head is 20-ft to Metals Pond and 120-ft to Pond D.
- 3. Minor losses are 10% of the total friction losses.
- 4. Pipe I.D. is based on SCH40 steel pipe; except from fenceline and beyond 1" of cement mortar lining is added, reducing I.D. accordingly.
- 5. Pipe C-value is for old pipe, i.e., 100.
- 6. Pipe lengths are per attached email from No. 5 Lift Station to fenceline.
- 7. Pump performance curve is the Hazelton Pump Model 8GN, 19.75-in Impeller, 1185-rpm curve based on the attached email.
- 8. A single No. 5 Lift Station pump is operational.

Please note that the 400-gpm operating point for the No. 5 Lift Station pump is 23%± of the design operating point. Depending on the manufacturer's recommended minimum continuous stable flow for the pump, this may also be unacceptable. We can refine the numbers and issue full calculations if desired.

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Sincerely,
John D. DeBarbieri, PE
Senior Project Engineer
GAI Consultants, Inc.
385 East Waterfront Drive, Homestead, PA 15120-5005
412.476.2000 ext. 1580 | [cid:image002.png@01D0C0B5.DB827D40] <a href="http://www.facebook.com/gaiconsultants">https://twitter.com/GAIConsultants</a>
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